

EXAMPLE [17]

MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

STANDARD MITIGATION MONITORING PROGRAM

Placer County has adopted a standard mitigation monitoring program (Section 31.825 of the Placer County Environmental Review Ordinance) in order to implement Public Resources Code Section 21081.6. This program requires that mitigation measures recommended for discretionary projects, such as Bickford Ranch, be included in the conditions of approval is monitored by the County through a variety of permit processes as listed below.

- Development Review Committee
- Improvements Plan Approval
- Improvements Construction Inspection
- Encroachment Permit
- Final Map Recordation
- Acceptance of Project as Complete
- Building Permit Approval
- Certificate of Occupancy

The issuance of any of the listed permits or County actions which must be preceded by a verification by County staff that certain conditions of approval/mitigation measures have been met shall serve as the required monitoring for those conditions of approval/mitigation measures. The following listing includes those mitigation measures for the Bickford Ranch project which will be monitored through County staff verification of required approvals.

Land Use

Mitigation Measure L-2: Design project elements to buffer the project from adjacent uses

Mitigation Measure L-2 also applies to Impact L-3.

The Applicant's proposed Specific Plan includes a variety of design elements to reduce incompatibility of the proposed project with surrounding residential and agricultural land uses. These elements include concentration of higher density development within the plan's interior, placement of rural residential densities along land that abuts buffer zones or open space, provision of buffer zones, common open space, natural open space easements, and wetland preservation easements to provide separation from nearby residences.

Mitigation Measure L-6: Limit construction of gates

To promote a sense of community and be consistent with General Plan policy 1.B.9, the Applicant will limit the construction of walls, fences, and vehicular access gates. The final plan for walls, fences within the Heritage Ridge area and along roadways and other features constructed by the Applicant, and gates will be approved by the Placer County Planning Department. Locations where walls, fences, and gates will be prohibited will be identified on the Tentative Map and incorporated into the proposed project's CC&Rs. Access control gates (or any entry feature that has the appearance of a gated entry) are not appropriate on property zoned for one acre or larger lots, located in rural residential/agricultural areas, and that limit through access between neighborhoods

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Population, Employment, and Housing

Mitigation Measure PH-5: Implement Affordable Housing Program.

The Applicant will develop or cause to be developed 189 below market rate housing units, affordable to lower income households earning not more than 80% of the Placer County Urban Development (“HUD”), adjusted for household size. The Applicant will construct up to 106 of the affordable housing units on-site, and will provide “gap financing” (i.e., the subsidy required to produce the housing) needed to provide the balance of the below market rate units not constructed on site.

Biological Resources

Mitigation Measure B-1: Preserve and enhance annual grassland vegetation adjacent to golf course

The Applicant will incorporate into the golf course design the preservation of annual grassland vegetation within undeveloped areas adjacent to the fairways. Vegetation in these areas will be enhanced by seeding with a locally collected native annual wildflower seed mix that includes species already present on site.

Mitigation Measure B-2b: Hire a project biologist for construction monitoring

Mitigation Measure B-2b also applies to Impacts B-3, B-4, B-5, B-7, and B-12.

The Applicant will retain a County-approved biologist to monitor all construction in areas of sensitive biological resources, including oaks and other protected trees to be retained, red-legged frog habitat, and wetlands and other waters of the United States. The monitor will be responsible for the following:

- scheduling and/or conducting pre-construction surveys identified in other mitigation measures (e.g., special-status plant and wildlife surveys, raptor nest surveys);
- approving placement of the orange barrier fencing and performing weekly monitoring to ensure the fencing remains in good condition for the duration of construction activity in the area affected by the particular phase of development;
- monitoring construction activities occurring near sensitive biological resources, as defined above, and delaying construction activities that threaten these resources until appropriate mitigation measures can be implemented; and
- identifying any impacts occurring within areas protected by the orange barrier fencing and reporting to Placer County for additional compensatory mitigation.

Mitigation Measure B-4f: Protect riparian buffer zones

Mitigation Measure B-F applies to Impacts B-4, B-10, and B-17.

Riparian buffer zones are necessary for the protection of stream water quality and habitat quality for red-legged frog and anadromous fish, including steelhead. The Applicant will implement the following measures during construction to ensure adequate protection for riparian buffer zones on the project site:

- Erect orange construction barrier fencing at the outside edge of the dripline of riparian vegetation adjacent to project construction areas. No construction activity or vegetation removal will be allowed past the barrier. The barriers will be maintained by a biological monitor and will remain in place until all adjacent construction activity is completed.

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- Construct all equestrian and pedestrian trails within the designated natural open space at least 25 feet from the outer edge of riparian vegetation.
- Bore and jack pipeline crossings of any drainages. Keep all pipeline construction activity at least 50 feet from the outside edge of riparian vegetation.
- Increase the buffer area to 100 feet from outermost edge of riparian vegetation along Clover Valley Creek and along the stream in the Meadows community natural open space adjacent to Sierra College Boulevard.

The Homeowners Association will be responsible for implementing the following measures to ensure adequate protection of riparian buffer zones after construction during the operation phase of the project:

- Develop additional protection for the wetland protection easement along Clover Valley Creek, which is part of the rural estate lot R-19. No structures may be erected or landscaping placed within this easement.
- No removal of vegetation may occur within the riparian buffer zone, except for essential maintenance (e.g., fire prevention activities). Prior to removal of blackberry or other riparian vegetation for proposed fire prevention or other maintenance activities within the riparian buffer zone, the Applicant must notify CDFG of the activity. If CDFG determines that the activity “may substantially adversely affect existing fish or wildlife resources,” the Applicant will be required to obtain a 1603 Streambed Alteration Agreement. CDFG has jurisdiction within the entire riparian corridor and regulates removal of riparian vegetation, even if the streambed is not directly affected (Hobgood, 2000). Removal of any riparian vegetation, whether or not the streambed or bank is altered, must be coordinated with CDFG through a Section 1603 Streambed Alteration Agreement.

Mitigation Measure B-12b: Install bat gates at tunnel entrances

Mitigation Measure B-N applies to Impacts B-12 and HW-5.

The Applicant will coordinate with Bat Conservation International (BCI) to prepare designs for bat gates designed to prevent human entry and provide free access to tunnels and shafts for bats. Final designs will depend on the mine opening configuration. Bat gates will be placed over all tunnel and shaft entrances that have been identified on the project site.

To avoid or minimize impacts on special-status bats, the Applicant will retain a qualified bat specialist to conduct surveys in the oak woodlands and human-made structures to determine if special-status bats are present within areas of the project site proposed for development. If no special-status bats are present, no additional mitigation is required. If special-status bats are present within development areas, the Applicant will incorporate into Mitigation Measure B-A a bat management and habitat improvement program. This program may include the installation of bat roost boxes in the open space areas or vegetation management in the open spaces areas to enhance and manage bat habitat. The Applicant will consult with CDFG regarding appropriate bat management.

Mitigation Measure B-15b: Develop and implement an open space management plan

The Applicant will develop and implement an open space management plan pertaining to the designated natural open space and open space easement areas on the project site. A management plan will be established to protect the habitat quality of wetlands, oak woodlands, and riparian habitat in the open

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space areas. The natural open space designation will be designed to preclude future development activities other than the proposed trail construction. The open space management plan will also be coordinated with the Applicant's oak woodland conservation and revegetation plan discussed under Mitigation Measure B-A, the Applicant's Wetlands Preservation and Impact Plan, and the proposed fuel modification zones. At a minimum, the plan will include the following information regarding designated natural open space and the open space easements:

- land use activities compatible with preservation of existing habitats, such as construction of linear infrastructure projects that minimize impacts on sensitive resources and trail construction designed to avoid or minimize impacts on wetlands and protected trees;
- land uses and practices that would be incompatible with habitat preservation, such as road or building construction, grazing, and use of pesticides or herbicides;
- establishment of adequate buffers between natural open space and planned development, which could include guidelines for placement of equestrian and pedestrian trails within the buffer zone to keep the remaining open space area intact and specific landscaping guidelines to design a transition zone between ornamentally landscaped development and natural open space;
- placement of interpretive signage at the beginning of, and along, trails to provide information about the on-site habitats and sensitive biological resources, including special-status species and wetlands;
- locations and methods for fuel modification in open space areas, such as vegetation removal methods;
- design methods for wetland easements to minimize mosquito nuisance conditions while retaining wetland habitat value;
- performance standards, such as the extent of vegetative cover and native species diversity, and a five-year interval monitoring program to evaluate responses of habitat in the open space according to the performance standards;
- potential remedial actions if habitat conditions show downward trends that are not related to natural factors such as extended drought; and
- fences that are placed along the perimeter of the Specific Plan area, especially near open space areas, shall be designed to allow small mammals as well as deer and other wildlife to pass through them without harming or trapping them. Where fencing is installed along the perimeter of the Specific Plan area, it shall be open wire rather than screen, net, or woven wire.

Cultural Resources

Mitigation Measure C-1a: Incorporate important cultural resources into open space

The Applicant proposes to incorporate important cultural resources into open space to the extent possible. Easement restrictions would then be incorporated in CC&Rs as necessary. CEQA stipulates that in-situ preservation is the preferred manner of avoiding damage to archaeological resources. By incorporating important cultural resources into open spaces or greenbelt, impacts to these resources would be avoided.

Mitigation Measure C-1b: Cap resource area with layer of soil prior to construction

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The Applicant proposes to cap important and potentially important archeological resources where feasible prior to construction in the area. An acceptable process of “capping” archaeological resources with soil must include the following elements:

- the soils to be covered must not suffer serious compaction;
- the covering materials must not be chemically active;
- the site must be one in which the natural process of deterioration have been arrested; and,
- the site must have been recorded, including the areal extent of subsurface deposits.

Mitigation Measure C-1c: Conduct data recovery excavation if capping is infeasible

Require the project Applicant to retain a qualified professional archeologist to conduct data recovery excavation. This mitigation measure would be implemented as an alternative to Mitigation Measures C-A or C-B at identified important or potentially important cultural resource sites.

In compliance with CEQA, implementation of this mitigation measure would entail preparation and adoption of a data recovery plan that makes provisions for adequately recovering the scientifically consequential information from and about the resource. The data recovery plan must be prepared and adopted prior to commencing any excavation activities.

Mitigation Measure C-2b: Conduct subsurface testing

Require the project Applicant to retain a qualified professional archeologist to conduct subsurface testing at potentially important cultural resource sites. As it has not been definitively determined that the 17 sites comprised of “isolated” milling stations do not contain subsurface deposits, subsurface testing procedures should be initiated for sites when construction is to occur within 100 feet and where Mitigation Measures C-1a and C-1b prove infeasible.

Subsurface testing procedures could involve shovel testing, augering, or other such techniques designed to identify and/or characterize subsurface cultural deposits. If a resource is determined to be important under CEQA, then Mitigation Measure C-1c (Conduct data recovery excavation) must also be implemented.

Visual Resources

Mitigation Measure V-1a: Provide transition areas and buffers between residential development and natural open space

The Applicant proposes to create transition and buffer areas between proposed residence and natural open space areas. Transition areas include those situations where the grading activities will create a transition slope between residential areas or between development and natural open space. Sloped transition areas between rear residential areas will be used as a landscaped extension of the natural landscape.

Mitigation Measure V-1b: Implement sensitive grading techniques to blend with natural setting

Mitigation Measure V-1b also applies to Impacts V-2, V-6, and G-1.

The Applicant proposes to implement sensitive grading techniques. These techniques include limiting grading areas, performing sensitive grading around existing oak trees (including the construction of retaining walls where necessary); blending cut and fill slopes into the natural terrain; rounding and feathering graded slopes into existing terrain to avoid an artificially contoured appearance; planting or

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otherwise protecting re-contoured slopes from the effects of water runoff and wind erosion within 90 days of completion of grading; setting street elevations as close to the existing natural grade as possible; constructing raised stepped or pier and grade foundations for dwellings located on steep slopes; and contour-grading with variable slopes in transition areas between residences and natural open space.

Mitigation Measure V-1c: Minimize grading within Meadows and Ridges developments

The Applicant proposes to limit grading to create flat useable open space within the Meadows and Ridges areas. Contouring for non-graded lots may be by means of pads or partial pads created within a predominantly non-graded area. Padding will be accomplished to have minimal impact on natural vegetation.

Mitigation Measure V-1d: Apply selected lot restrictions

The Applicant proposes to restrict the height of structures on select lots, based on Effective Height Analysis. In addition, in these selected locations the Applicant proposes to restrict the colors of roofing and exterior trim and walls, exterior lighting height, tree removal, structure profile, and the height of accessory structures. In these locations, all glass above 20 feet in height shall be low reflectivity, and where insufficient tree cover exists native vegetation will be planted for screening in time to reach the “effective height” prior to construction.

For select areas of visibility in Zone 5, the Applicant proposes to restrict the height of the structures and to restrict the colors of roofing and exterior trim and walls, exterior lighting height, structure profile, and the height of accessory structures. In these locations, all glass above 20 feet in height shall be low reflectivity. For Zone 6, the Applicant proposes to restrict the colors of roofing and exterior trim and walls of the structures and accessory structures.

Mitigation Measure V-1e: Retain hill at the intersection of SR 193 and Sierra College Boulevard

Retention of local topography in this area will provide a visual buffer to much of the meadows development from this intersection. Although this topography provides a visual buffer in only an isolated location, it screens views from the intersection of two heavily traveled roads.

Mitigation Measure V-1f: For all lots containing slopes of 30 percent or greater, record on final map and reflect in the development notebook for such lots a slope easement at the 30 percent slope starting point. No building envelopes or structures shall be permitted on the portion of the lot where slopes are 30 percent or greater.

The Applicant will record construction envelopes (developable portions of the lot with slopes less than 30 percent) on the Tentative Map.

Mitigation Measure V-1g: For all lots containing slopes of 30 percent or greater, structures and building envelopes shall be prohibited on those portions of the lot where slopes are 30 percent or greater.

On lots with recorded construction envelopes, the Applicant will prohibit structures outside of the recorded building envelope.

Mitigation Measure V-1h: For all lots containing slopes of 30 percent or greater, prohibit development on those portions of the lot where slopes are 30 percent or greater.

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The Applicant will prohibit development on all lots with a 30 percent slope or greater that have no recorded construction envelope.

Mitigation Measure V-1i: Revise Lighting Design Guidelines

The Applicant shall move the Lighting Guidelines to the project's Development Standards, and revise the language to explicitly add the following:

- Project Development Standards and Design Guidelines will be implemented to achieve consistency with the recommended standards of the Illuminating Engineering Society (IES) (San Juan Capistrano General Plan).
- The IESNA Lighting Handbook, 9th Edition, is incorporated by reference as the applicable standard for project roadway lighting under the Project Development Standards.
- In general, direct glare shall not be observable (outside the originating property limits) at an angle greater than 85 degrees from the nadir of the vertical axis of the light source.
- Cut-off luminaires, shields, visors, recessed lights or other devices to direct and control obtrusive light shall be used; luminaire mounting to minimize incidence of direct glare in the observer's normal field of view; and minimum luminaire brightness consistent with the function of the lighting.
- Where lighting for security purposes is desired or needed, motion sensor-activated lights shall be used to augment area illumination, rather than continuous lighting.
- Directional, shielded lighting shall be used which eliminates all direct glare or obtrusive light and restricts upwardly directed light only to the features being illuminated.
- The Applicant will specify recommended luminance/illuminance values for roadways as recommended in Table 2 of IESNA/ANSI RP-8.
- Street and area-lighting, including lighting for sports activities, parking lots, and vehicle sales lots, shall minimize or eliminate, where feasible, direct upward light emission more than 0.2fc 30 feet beyond the property (above 90 degrees from the nadir).
- Lighting systems that project light upward shall eliminate light that does not illuminate the target area, such as on project entry signs. No spill light shall be allowed to go beyond or above the sign.
- Outdoor lighting shall be turned off after use unless needed for safety and security.
- In general, IESNA recommendations for lighting intensity levels (as found in RP-33, RP-8, RP-2, DG-5, RP-20, and other specific recommendations) will be observed, where recommendations are available.
- Full Cut-Off (FCO) luminaires shall be used for all street lighting, thus minimizing potential direct glare and light pollution. Dropped dish (ovate) refractors shall NOT be used in roadway luminaires. Only FCO luminaires with flat lenses or other recessed and shielded design shall be permitted.

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Transportation

Mitigation Measure T-1a: Prepare and implement construction traffic management plans for on-site construction activities for Bickford Ranch Road and Sierra College Boulevard, and coordinate with appropriate agencies in the preparation and implementation of construction traffic management plans for required off-site improvements

Prior to the beginning of each portion of the project construction, including Bickford Ranch Road, Sierra College Boulevard and off-site water and sewer lines, a construction traffic management plan should be prepared by the Applicant to the satisfaction of the Placer County Public Works Department. An exception would be individual residence construction in the Meadows and Ridges areas. These plans should involve an analysis of traffic volumes on roadways where one-way traffic control would be required to determine if the hours of such control should be limited. Traffic management plans should consider providing flag persons as necessary to facilitate traffic flow through construction areas, and arranging construction schedules to begin and end during off-peak hours.

Mitigation Measure T-1b: Implement a community relations program during on-site construction, and coordinate with appropriate agencies in the implementation of a community relations program during construction of required on-site and off-site improvements

Residents near the proposed project site, near areas of off-site improvements, and in proposed project residences which would be occupied during Phases 2 and 3 of proposed project construction should be notified of construction schedules in advance through postings and mailings. By notifying potentially affected community members in advance of construction activities and providing a mechanism for complaints, affected residents could avoid the construction areas during periods of intense activity. Community residents could also develop a more tolerant attitude toward construction activities if they are informed of them in advance, and are apprised of the length of construction activities in their area.

This mitigation measure would also minimize the disruption and annoyance caused by construction noise, although it would not reduce noise levels generated by construction activities.

Mitigation Measure T-2: Pay pro-rata fair share of reconstruction of the I-80/Sierra College Boulevard interchange

The unacceptable levels of service at the intersections of Sierra College Boulevard with the eastbound and westbound ramps to I-80 would require a widening of Sierra College Boulevard to four lanes. Both of these intersections are immediately adjacent to the Sierra College Boulevard overpass to I-80. This overpass is narrow, has a short vertical curve, and does not meet current standards for vertical clearance between the bottom of the structure and I-80. For these reasons, the improvement that would be needed to mitigate unacceptable levels of service at the Sierra College Boulevard intersections with the I-80 eastbound and westbound ramps would require a reconstruction of the Sierra College Boulevard interchanges at I-80, including the overpass structure.

The Applicant proposed to pay a pro-rata fair share of the cost to reconstruct the I-80/Sierra College Boulevard interchange. The City of Rocklin has been working with Caltrans on a Project Study Report to identify the appropriate design of this interchange. The new interchange should be designed to accommodate cumulative traffic conditions on Sierra College Boulevard (i.e., with buildout of the proposed project, the Twelve Bridges Specific Plan, and the Clover Valley Lakes development). This mitigation measure was assumed to be implemented under the 2010 General Plan and Buildout of Project Vicinity conditions.

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Mitigation Measure T-4: Pay pro-rata fair share to widen Sierra College Boulevard from two to four lanes from Taylor Road to I-80

Under Existing Plus Project traffic conditions, this section of roadway should be widened to four lanes.

Mitigation Measure T-5: Pay Placer County traffic mitigation fees

The analysis of 2010 General Plan and Buildout of Project Vicinity Plus Project conditions did not include the planned SR 65 Bypass around central Lincoln. This bypass is planned to be constructed by 2010, but does not yet have funding. The Placer County Traffic Mitigation Fee Program includes a share of the funding for route adoption and right-of-way for the Lincoln Bypass. With construction of this bypass, the intersection of SR 65 and SR 193 is anticipated to operate at acceptable levels of service under 2010 General Plan Buildout of Project Vicinity Plus Project conditions.

Mitigation Measure T-8: Pay pro-rata fair share of adding a second westbound left-turn lane on Taylor Road at the Sierra College Boulevard intersection

Under the No Project Alternative for the 2010 General Plan scenario, it was assumed that this intersection would have two through lanes and a separate left-turn lane on all four approaches. The unacceptable level of service with the proposed project could be mitigated by the addition of a second westbound left-turn lane on Taylor Road.

Mitigation Measure T-9: Pay pro-rata fair share of widening Sierra College Boulevard from four to six lanes from Taylor Road to Granite Drive

Under 2010 General Plan and Buildout of Project Vicinity conditions, this section of Sierra College Boulevard would require six lanes to provide an acceptable level of service. (Under Existing Plus Project traffic conditions, this section of roadway should be widened to four lanes; see Mitigation Measure T-1a.)

Mitigation Measure T-10: Pay pro-rata fair share of the cost to add shoulders and improve vertical and horizontal curves along English Colony Way

Traffic volumes would exceed the recommended threshold where safety improvements should be considered on a roadway like English Colony Way. The recommended mitigation calls for the addition of shoulders plus improvements to sharp vertical and horizontal curves on some sections of English Colony Way between Sierra College Boulevard and Clark Tunnel Road.

Mitigation Measure T-11: Participate in any development-based funding of solutions to I-80 congestion if adopted by Placer County

Placer County policy does not require the County or local development to finance the upgrading of I-80 to provide additional capacity for through traffic. However, if the County adopts a development-based funding mechanism for solutions to the I-80 corridor, the proposed project will participate in that funding.

Mitigation Measure T-14: Pay pro-rata fair share of adding a second northbound left-turn lane on Sierra College Boulevard at Twelve Bridges Drive intersection

A second northbound left-turn lane on Sierra College Boulevard at the intersection with Twelve Bridges Drive is the recommended mitigation measure due to the heavy northbound left-turn volume during the p.m. peak period.

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Mitigation Measure T-16: Pay pro-rata fair share of adding a westbound right-turn lane on King Road at Sierra College Boulevard intersection

The most cost-effective mitigation measure is the addition of a westbound right turn lane on King Road at the intersection with Sierra College Boulevard.

Mitigation Measure T-17: Pay pro-rata fair share of adding right-turn lanes in both directions on Taylor Road at the English Colony Way intersection

This intersection was assumed to be signalized under both 2010 General Plan and Buildout of Project Vicinity conditions based on a planning level signal warrant analysis. This mitigation measure would involve the addition of right turn lanes on both of the Taylor Road approaches to this intersection.

Mitigation Measure T-19a: Provide a park-and-ride lot and two bus stops

The Applicant proposes to provide a park-and-ride lot at the Village Commercial Center, and two bus stops within the project area. These project features would contribute to reducing the unmet transit needs generated by the proposed project, but would not reduce them to a less than significant level.

Mitigation Measure T-19b: Participate in fair share of the cost of limited transit services

If an unmet transit need is identified by PCTPA, the proposed project should share the cost of providing limited transit services. These potential services would likely focus on meeting basic medical and shopping needs for elderly residents of the Heritage Ridge Community.

Mitigation Measure T-20: Provide Class II bike lanes on Bickford Ranch Road and Lower Ranch Road

The Applicant proposes to construct Class II bike lanes on Bickford Ranch Road and Lower Ranch Road. These roadways would connect with existing and planned adjacent roadways outside the project area, and contribute to meeting the demand for recreational and transportation related bicycle trips generated by proposed project residents and others.

Mitigation Measure T-21a: Provide signing and striping on Bickford Ranch Road at the golf cart crossings

The Applicant has proposed some signing and striping at two crossings of Bickford Ranch Road, a public street. The proposed design raises safety issues due to the location of the crossings, the potential speed on Bickford Ranch Road and the lack of traffic control. The Applicant shall work with Placer County to define an acceptable plan for these crossings that address safety concerns.

Mitigation Measure T-21b: Work with Placer County to design an acceptable Golf Cart Crossing Plan

Similar to Mitigation Measure T-P, above, the Applicant shall work with Placer County to define a plan for golf cart crossings at Bickford Ranch Road. This plan must be approved by the Placer County Board of Supervisors.

Mitigation Measure T-22: Construct a third lane on Sierra College Boulevard opposite the project boundaries

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In order to comply with the provisions of General Plan Policy 3.A.2, the Applicant will construct required frontage improvements on Sierra College Boulevard. These improvements shall consist of a third through lane on the west side of the roadway for the length of the project boundary.

Mitigation Measure T-23: Install traffic signal at the intersection of Sierra College Boulevard and the unnamed road north of Lower Ranch Road, south of SR 193

Air Quality

Mitigation Measure A-1b: Maintain construction equipment and vehicles

Well-maintained equipment generates less pollutant emissions than poorly-maintained equipment. All construction vehicles and equipment will be maintained according to manufacturers specifications. Construction contractors must be required to show written evidence of appropriate maintenance prior to bringing equipment on site.

Mitigation Measure A-1c: Implement a construction worker trip reduction program

Construction contractors will be required to develop and implement a construction worker trip reduction plan aimed at achieving an average vehicle ridership of 1.5. This would reduce vehicular pollutant emissions associated with construction employee travel.

Mitigation Measure A-1d: Require use of low-emission construction materials and equipment where feasible

Construction contractors will be required to use low-VOC architectural coatings and asphalt in compliance with District Rules and Regulations. Use of low-VOC architectural coatings and asphalt would substantially reduce project-generated ROG emissions. Use of low-emission mobile and stationary construction equipment would reduce combustion emissions of all criteria air pollutants. Contractors will also be required to fuel stationary construction equipment with low-sulfur fuels, and use existing power sources (e.g., power poles) or clean fuel generators in place of temporary power generators whenever feasible.

Mitigation Measure A-3a: Incorporate pedestrian, bicycle, and golf-cart oriented design

The Applicant proposes to include provisions for pedestrian walkways and sidewalks to most internal destinations and other pedestrian-oriented facilities, including pedestrian paths and sidewalks to most destinations, moderate shade coverage on streets, visually interesting land uses within walking distance, and a high degree of pedestrian safety. The proposed project also includes paved bicycle lanes and paths, interconnected bikeways, and mixed land uses within bicycling distance. The Circulation Element of the project also complies with this mitigation measure by encouraging golf-cart use for internal trips.

Mitigation Measure A-3b: Incorporate mixed land uses into the project design to reduce external vehicle trips

The Applicant proposes to design the Village Commercial Center to accommodate day-to-day needs of proposed project residents, to minimize the need for external vehicle trips.

Mitigation Measure A-3c: Accommodate and encourage low-emission energy use

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A number of residential design features can accommodate and encourage use of alternative energy sources. The Bickford Ranch Specific Plan Air Quality Design Guidelines will be amended to include the following measures:

- Install natural gas hookups in all new fireplaces;
- Install a natural gas outlet in the backyard of all new residences for gas-burning barbecues;
- Install electrical outlets at the front and back of new residences for electrical yard equipment;
- Install low-NO_x hot water heaters per PCAPCD Rule 246;
- Install electric vehicle recharging circuits in all residential garages in Heritage Ridge, and recharging raceways in all other residential garages;
- Incorporate into project CC&Rs the restriction to electric-powered golf carts on the project site;
- Encourage landscape maintenance companies to use battery-powered or electric equipment for non-residential maintenance activities, where feasible; and
- Construction contracts shall stipulate that at least 20% of the heavy-duty off-road equipment included in the inventory be powered by CARB-certified off-road engines, as follows:

175 hp – 750 hp	1996 and newer engines
100 hp – 174 hp	1997 and newer engines
50 hp – 99 hp	1998 and newer engines

- The prime contractor shall submit to the APCD a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. APCD personnel, with assistance from the California Air Resources Board (if available), will conduct initial Visible Emission Evaluations of all heavy-duty equipment on the inventory list.
- An enforcement plan shall be established to evaluate on a weekly basis project-related on- and off-road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180-2194. An Environmental Coordinator, who is CARB-certified to perform Visible Emissions Evaluations, shall routinely evaluate project-related off-road and heavy-duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified, and the equipment must be repaired within 72 hours.
- Minimize idling time to 10 minutes.
- Schedule operations affecting traffic for off-peak hours whenever possible.
- Use air conditioning units with an Ozone Destruction Catalyst. Provide natural gas lines or electrical outlets to all backyards to encourage use of natural gas or electric barbecues, as well as electric lawn equipment.
- Prohibit (through CC&Rs) the use of gasoline-powered lawn mowers on homes with lot sizes under 0.5 acre.
- Prohibit (through CC&Rs) use of gas-powered golf carts.

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- Install Class I bicycle lockers along with bike racks in commercial site.
- Build unmanned informational kiosk in central location in Village Center.

The above measures will be included as part of the proposed project design and included in residential CC&Rs. In addition, the Air Quality Design Guidelines will be amended to encourage implementation of the following measures:

- Incorporate passive solar building design and landscaping conducive to passive solar energy use (i.e., building orientation in a south to southeast direction where feasible, encouraging planting of deciduous trees on western sides of structures, landscaping with drought-resistant species, and including groundcovers rather than pavement to reduce heat reflection);
- Incorporate solar heaters in proposed project residences as feasible;
- Include high-efficiency heating and other appliances, such as water heaters, cooking equipment, refrigerators, furnaces, and boiler units; and
- Include energy-efficient window glazings, wall insulation, and efficient ventilation methods on all new residential units.

Mitigation Measure A-3d: Install only natural gas CNG fireplaces

Mitigation Measure A-3e: Provide public awareness materials

The CC&Rs will require that educational materials regarding air quality be included in homeowners/renters packages for all occupants. Information contained in these packages will, at a minimum, provide information in the following areas:

- Commute options: Inform project occupants of the amenities provided by the proposed project in terms of alternative travel modes, including ridesharing and mass transit availability/schedules; and,
- Alternative transportation options: Provide maps showing pedestrian, bicycle, and golf-cart paths to community centers, shopping areas, and recreational areas.

Mitigation Measure A-3f: Incorporate into project CC&Rs the prohibition of open burning of any kind

Open burning creates substantial pollutant emissions of ozone precursors, CO, and PM. The company employed to maintain landscapes for the proposed project will be prohibited from open burning of vegetative refuse anywhere in the SVAB. No open burning will be allowed on any of the residential, commercial, or recreational parcels.

Mitigation Measure A-3g: Implement an off-site mitigation program to reduce 105 percent of long-term air pollutant emissions

To reduce the identified impact to a less than significant level, the Applicant shall implement an off-site mitigation program that is equal to reducing 40 percent of the proposed project's long-term air pollutant emissions. The Applicant shall develop the mitigation program which shall be approved by the PCAPCD. Alternatively, the Applicant could pay air quality mitigation fees to the Placer County Air Pollution Control District. Air quality mitigation fees would be used to fund measures aimed at improving air quality in Placer County, such as public transportation funding, financing of commuter

EXAMPLE [17] continued

rideshare programs, heavy duty NO_x reduction programs, and the woodstove replacement program. To reduce the identified impact to a less than significant level, PCAPCD will require a reduction of summertime NO_x emissions by 40 percent. Air quality mitigation fees will be based on a cost of \$10,000 per ton of NO_x emission reduction. This measure has been implemented for a number of projects in Placer County to reduce a project's long-term air quality impacts.

Mitigation Measure A-3h: Provide dedicated parking spaces at the park-and-ride lot with electrical outlets for electric vehicles

Additional residential design features can accommodate use of alternative energy sources. Amend the Bickford Ranch Specific Plan Air Quality Design Guidelines to include dedicated parking spaces at the park-and-ride lot with electrical outlets for electric vehicles.

Noise

Mitigation Measure N-1b: Prior to grading or improvement plan approval, develop and implement a construction equipment noise abatement program

Construction equipment noise will be reduced by implementing the following measures:

- Install intake and exhaust mufflers recommended by the equipment manufacturer;
- Equip pavement breakers and jack hammers with manufacturer-recommended acoustically alternating shrouds or shields; and
- Equip all internal combustion engines with a manufacturer-recommended muffler.

Mitigation Measure N-2: Develop and implement a construction traffic noise abatement program to include the restriction of construction truck traffic on non-major roads

Require the construction contractor to develop a construction traffic plan that restricts construction vehicle traffic on non-major roadways through residential neighborhoods in the study area. Local residents will be informed of proposed construction routes as part of the community relations program identified in Mitigation Measure T-B.

Mitigation Measure N-4a: Incorporate building setbacks and noise barriers into the proposed project design

The Applicant has proposed building setbacks throughout the proposed project site. In the vicinity of the UPRR line, the minimum building pad setback is 210 feet from the track centerline. Steep and complicated topography in this area would render noise barriers impractical and would limit noise barrier effectiveness. At the minimum setback of 210 feet, however, all residences in the area would be within the 65 dBA L_{dn} allowable for new residential construction (following an acoustical analysis and implementation of feasible mitigation measures) under the Placer County General Plan, and most residences would be within the 60 dBA L_{dn} contour.

The proposed project design also entails residential property line setbacks and construction of community fences along roadways in the project area. Community fences would border Lower Ranch Road wherever residential property lines abut the roadway; where no community fences are planned, residential sites are set back at least 70 feet from the roadway centerline. Community fences are also planned in many areas along Bickford Ranch Road; in areas along Bickford Ranch Road where community fences are not proposed, residential building setbacks range from 50 to 135 feet from the roadway centerline.

EXAMPLE [17] continued

Mitigation Measure N-4b: Inform prospective buyers of potential rail noise exposure exceeding 60 dBA L_{dn}

The Applicant will inform prospective buyers of Lots 12-18 and 21 on Parcel 7 of the potential exterior noise exposure from railroad operations exceeding the 60 dBA L_{dn} threshold considered normally acceptable for residential development.

Mitigation Measure N-4c: Implement community park design measures to minimize potential noise impacts

The Applicant has proposed a number of design measures at project parks to minimize potential noise impacts. These measures include the following:

- No lighting is proposed within either Bickford Ranch Park or Tower Park. This minimizes the potential for noise impacts by precluding nighttime equestrian or athletic events.
- Park activity areas are located away from residential property borders. At the Bickford Ranch Park, a natural open space area, a wetland preservation easement, and other planned setbacks would result in a 150- to 400-foot buffer between residential sites park activity areas. The Bickford Ranch Park's equestrian area, which would host larger park events, would be at least 400 feet from the nearest residential outdoor activity area. At Tower Park, activity areas and residential areas would be separated by an approximate 100-foot buffer.
- Recreational facilities at Tower Park would limit the park use to small-scale active and passive recreation, including one sport court, a tot lot, and swings.

Should the park design plan change substantially or should distances between residential sites and park features be reduced, subsequent analysis of potential noise impacts would be required.

Mitigation Measure N-4d: Inform prospective buyers of potential community noise sources

The Applicant proposes to inform prospective buyers of residential properties of potential community noise sources. Similar requirements will be included in the CC&Rs.

- Prospective buyers of lots adjacent to the northeastern park boundary and south of the park will be informed regarding the approximate frequency and content of noise-generating community events at the park including athletic events and any events which would include the use of a public address system.
- Prospective buyers of lots adjacent to the proposed school site reservation and along school access roadways will be informed regarding the potential presence of the school site, and the likely frequency and content of noise-generating activities at the site. The Applicant will work with the applicable school district to prepare this information.
- Prospective buyers of lots bordering Tower Park will be informed regarding potential park uses and hours of operation.
- Prospective buyers of lots sharing a border with the Village Commercial Center will be informed regarding potential land uses and use restrictions at the Center.

EXAMPLE [17] continued

- Prospective buyers of lots adjacent to the Village Recreation Center would be informed regarding potential outdoor activity area uses and hours of operation.
- Prospective buyers of lots within 1,000 feet of the fire station site will be informed of the potential noise disturbance associated with emergency events.

Mitigation Measure N-4e: Restrict the timing and location of truck deliveries to the Village Commercial Center

The Applicant proposes to include restrictions on the timing and location of truck deliveries to facilities at the Village Commercial Center. Heavy truck deliveries would be prohibited along the eastern edge of the commercial center where there is a shared border with residential lots. All deliveries to businesses in this area would be restricted to daytime hours (7:00 a.m. to 6:00 p.m.).

Mitigation Measure N-4f: Require 6-foot block or masonry walls along project roadways where residential areas would fall within the 60 dBA L_{dn} contour

As described in Mitigation Measure N-4a, the Applicant has proposed to provide residential lot setbacks and to construct community fences along most project roadways. The Applicant will amend the Specific Plan to specify that in areas where residential lot lines would fall within the 60 dBA L_{dn} contour as identified in Figure 9-1 and Table 9-8, community fences will be constructed of concrete block, masonry, or other materials having a minimum density of 4.0 pounds per square foot.

Mitigation Measure N-4g: Restrict business hours of operation within specified areas of the Village Commercial Center

Amend the Specific Plan to require that minor use permits issued for the Village Commercial Center restrict business hours to between 7:00 a.m. and 10:00 p.m. at those commercial sites facing proposed residential lots west of the Village Commercial Center.

Geologic Resources

Mitigation Measure G-1a: Comply with Placer County ordinances for all grading, drainage and construction of improvements

The Applicant proposes that all grading, drainage and construction of improvements will be in accordance with the Placer County Grading Ordinance, Chapter 29, Sections 29.1 through 29.10 of the Ordinance Code of Placer County. Specific sections applicable to this project include, but are not limited to:

- Sections 29.510 and 29.520 covering the content of preliminary and final grading plans to be submitted to the County for review and determination of grading permit requirements.
- Section 29.550 regarding implementation of erosion and sediment control plans to take into consideration time of year in terms of potential for rainfall and heavy storms.
- Sections 29.610, 29.615, 29.620, 29.625 and 29.630 regarding geotechnical, geologic and final reporting requirements.
- Section 29.780 regarding submission of erosion and sediment control plans for timely implementation of measures to prevent increased discharge of sediment during all stages of construction and effective revegetation to stabilize disturbed areas.

EXAMPLE [17] continued

Plans required under this ordinance will be submitted to and approved by the County prior to commencement of construction activities. These measures would reduce the impacts of these activities to less than significant.

Mitigation Measure G-2: Comply with the conclusions of a site-specific geotechnical investigation

The Applicant proposes that, prior to the commencement of any earthwork on the project site or study area infrastructure improvement corridor, a full-scale, detailed geotechnical investigation will be completed. A specific geotechnical evaluation performed after specific plans have been developed for the proposed project will include:

- Soil borings;
- Laboratory testing; and
- Grading and design recommendations.

The grading and design recommendations will, at a minimum, address the following issues:

- Fill control plan;
- Expansive soils;
- Differential settlement;
- Slope instability;
- Foundation instability;
- Stream bank protection;
- Evaluation of inactive mine sites and tunnels; and
- Other significant geological characteristics pertinent to proper development of the project site and off-site infrastructure improvement corridor.

The geotechnical investigation will consist of soil borings to collect samples and laboratory testing to determine the appropriate design parameters for use in determination of the structural fill, roadbed fill, and landscaping fill requirements, along with the fill placement requirements. The various soils will also be tested for corrosivity, to allow for proper foundation design.

Design of engineered fills will require that the geotechnical investigation assess the structural properties of each of the different soils types throughout the project site. Such an investigation will address specific areas of the project site to be developed in order to account for the various structures and roadways proposed for that particular area.

The geotechnical investigation will provide recommendations for monitoring of grading and fill placement and compaction testing to be performed to ensure proper placement of all fill types (structural, non-structural, and roadbed).

In addition to the measures mentioned above, soils will be tested for their shrink-swell potential. Soils with low strength and/or high shrink-swell potential will be controlled by over-excavation, or covering these soils with a sufficient amount of granular soils (as determined by the geotechnical investigation). Potentially expansive soils will only be placed in areas determined not to consist of structural fill.

In addition to evaluation for engineered fills, specific geotechnical evaluation of engineered slopes will also be included in the geotechnical evaluation. All proposed cut and/or fill slopes will be evaluated for proper design in order to reduce the hazard of over-steepening and/or removing of their lateral support, both of which could lead to slope instability, structural failure, and landsliding. If necessary, slopes will be designed with additional lateral support, such as buttressing, and fill slopes will be properly keyed into

EXAMPLE [17] continued

competent formational materials. Slopes (banks) along the creek channels will be designed with proper slope protection to prevent soil erosion and channel-bank undercutting.

The geotechnical evaluation will include specific recommendations for inactive mine sites where potential collapse of tunnels, shafts, or air shafts could effect the stability of improvements or otherwise create a safety hazard.

These measures would reduce the impacts for differential settlement, foundation instability, expansive soils, and slope instability to levels which are less than significant.

Mitigation Measure G-5a: Implement appropriate trail design, construction and maintenance standards to minimize erosion

Wilderness trails will be constructed and maintained based on appropriate and standard trail construction guidelines, such as U.S. Forest Service Trail Handbook 2309.18 (USFS, 1991). Soil type and trail grade should be considered with reference to cross drain frequency, and grades should be minimized on highly erosive soil types. Since cross drains are maintenance intensive, particularly under equestrian use, trails should be designed to eliminate them where possible by rolling the grades, i.e., providing dips on graded sections to eliminate long sloped trail sections. Design, construction and maintenance of wilderness trails based on standardized trail construction guidelines would reduce the potential impact of erosion to less than significant.

Hydrology and Water Quality

Mitigation Measure H-1a: Prepare and implement a post-development stormwater management program

The Applicant proposes to develop a Stormwater Management Program under the guidelines set up by the Placer County Flood Control and Water Conservation District's Stormwater Management Manual. The components of the program include protection from flooding, protection and enhancement of the stream environment, prevention of erosion and adverse water quality, incorporation of regional stormwater management goals, creation of multiple resource use, and assurance of the growth of the project to minimize its adverse impacts.

The purpose of this mitigation measure is to provide a plan for ensuring that structural BMPs constructed as part of the proposed project are maintained appropriately such that they continue to perform their intended function as long as the project site is occupied. Placer County does not have an NPDES permit covering storm water discharges in the county; however, the Placer County General Plan sets forth several policies which function to bring the County into compliance with the substantive requirements of the NPDES program. The Storm Water Management Plan will address site-specific drainage characteristics, storm water conveyance systems, discharge points, potential sources of runoff quality impacts, specific structural BMPs that have been constructed as part of the project, recommended operational BMPs, a maintenance program for structural BMPs, a monitoring program designed to evaluate the need for BMP modifications or additional BMPs, and identification of specific parties responsible for implementing each part of the plan.

Mitigation Measure H-1b: Provide runoff rate control

The Applicant proposes runoff rate control for detaining peak stormwater flows. The proposed project includes detention structures (ravine detention ponds, excavated detention ponds and lakes) to reduce the flow rate during peak storm events to less than the existing flow. This is based on the Placer County

EXAMPLE [17] continued

Storm Water Management Plan requirements. The structures will be constructed with low flow outlets and high flow spillways in order to catch and detain the peak of the storm and regulate the rate of discharge to the receiving body of water. The structures will be designed to meet the County requirements. Figure 3-21 shows the location of the detention structures for the proposed project.

Mitigation Measure H-2: Provide retention storage

The Applicant will construct or cause to be constructed 108 acre-feet of retention storage within the Auburn Ravine watershed. The retention storage will be provided either entirely off-site or through a combination of on-site and off-site storage. The Applicant is formally communicating with the City of Lincoln to increase the volume of the City's Master Drainage Plan retention basin to accommodate the increase in runoff volume emanating from the proposed project site. However, additional technical analysis would be required to demonstrate the feasibility of increasing the storage volume of the City's retention basin such that it would accommodate the proposed project runoff volume. In addition, the current schedule for design and construction of the basin extends over a period of several years. Therefore, until off-site retention storage is constructed and available for mitigation of increased runoff volumes emanating from the proposed project site, the Applicant shall, prior to commencement of construction of any phase of the project that discharges runoff into Auburn Ravine, provide technical analysis demonstrating that on-site retention storage is being provided in compliance with the requirements of Sutter and Placer counties.

Mitigation Measure H-5c: Design runoff detention basins to promote solids settling and provide capacity for accumulated sediment

The Applicant proposes several runoff detention basins to mitigate potential hydrologic impacts caused by increased runoff volume. These basins will also be designed as structural BMPs to control potential sediment discharges to receiving surface water bodies. The design will consider peak flows and provide for excess capacity to accommodate accumulated sediment. The Applicant will provide for long-term operation and maintenance of the basins by the Homeowners Association through incorporation of provisions in the CC&Rs.

Mitigation Measure H-6b: Finalize and implement the Applicant's Lake Management Plan for constructed lakes and wetlands areas

The Applicant proposes to construct several man-made lakes in the Meadows area of the proposed project. These lakes are planned to function as natural ecosystems with vegetation appropriate to lake and/or wetlands habitat and will receive stormwater runoff from a portion of the project site. The lake systems will likely be attractive to wild waterfowl, and residents might potentially introduce fish and/or birds. Based on the results of the preliminary geotechnical investigation, the local groundwater table in this area is relatively shallow, and groundwater may therefore be encountered during construction of the lakes. If the system is designed properly, including consideration of lake depth, surface area, types of vegetation, and vegetation densities, the system would tend to provide for natural degradation of organic waste products which would otherwise tend to infiltrate and impact groundwater quality. Additionally, such a design will also promote biological treatment of organic pollutants introduced into runoff in catchment areas draining into the lake system, thereby allowing the lakes to function as a storm water structural BMP. A draft Lake Management Plan has been developed in concert with appropriately trained specialists in the field of aquatic ecosystems, and includes specific plans for vegetation types and densities that will support and promote long-term health of the system while minimizing the need for maintenance. The plan also addresses maintenance requirements, present a monitoring program to ensure that the system continues to function as designed following project buildout, and identify parties responsible for maintaining the system. Because the lakes are part of the natural open space areas

EXAMPLE [17] continued

dedicated to the County, the County will be responsible for the long-term operation and maintenance of the lakes.

The Final Lake Management Plan shall include (but not be limited to) the following items:

1. Section 1 – Project Description of Lakes: Characterize water quality from Caperton Canal; identify expected volume of make-up water; monitor total dissolved solids in make-up water to ensure that it will not adversely affect existing water quality coming from Caperton Canal.
2. Section 2 – Lake Construction: Calculate the estimated seepage rate for the method chosen for sealing lake bottoms, and choose a method (among the alternatives presented in the draft plan) that does not allow high seepage rates. Provide a complete description of lake maintenance infrastructure that will achieve the objectives of the plan.
3. Section 3 – Lake Management: Identify the parties responsible for maintaining the lake management systems. In Section 3.1, describe the nutrient input control and turnover rates necessary to ensure proper maintenance. Finalize the description of the revegetation plan (include additional mid- and low-level species to ensure sufficient habitat during the natural revegetation period; specify recommended flora densities). In Section 3.6, identify soil erosion techniques and implementation procedures to control soil erosion. In Section 3.8, identify management techniques to control aquatic invertebrates and fish species that might become established in the lakes.
4. Section 4 – Recreation: Identify provisions for non-destructive access to the lakes for non-motorized boats.
5. Section 5 – Lake Monitoring: Monitor Lakes Six and Seven for total petroleum as oil, total petroleum as gasoline, and semivolatile organic compounds to ensure that contamination from the road intersecting the two lakes and the associated traffic does not adversely affect water quality, using RWQCB standards. For the first year, collect and analyze one sample per quarter. If no contamination is detected, monitoring activity could be decreased to an annual or semiannual schedule.

For all lakes, include monitoring for pesticides and herbicides used on the golf course, using RWQCB standards, monthly for the first two years and quarterly for the subsequent three years unless contamination is present at levels indicating that continued monitoring is appropriate.

For Lakes One, Two, and Three, monitor for contamination that might result from activities on this property, such as leakage from the septic tank and sediment accumulations due to erosion.

6. Section 6 – Water Quality Corrective Actions: Develop a corrective action threshold above 5 mg/L for dissolved oxygen in order to ensure that the health of lake biota is not jeopardized by a sudden decrease in dissolved oxygen levels. Identify corrective action for contamination resulting from runoff from the road, from chemical usage, and from activities on the NAPOTS property affecting lake water (if any).
7. Section 7 – Corrective Action Management Alternatives to Common Problems: Delete full draw down or the use of dyes as two alternative methods for managing nuisance aquatic vegetation. Revise Section 7.2 regarding muddy water to identify the cause(s) of the turbidity and implement a management strategy to ensure its reduction, rather than treating the effects. Identify appropriate fishing seasons for each species of game fish identified in Section 7.3.

EXAMPLE [17] continued

Implementation of a Lake Management Plan approved by the County would adequately address impacts associated with the constructed lakes and wetland areas.

Mitigation Measure H-6d: Design and construct improvements to protect water quality in canals in accordance with PCWA standards and County requirements for a 100-foot setback from structures

The proposed project provides for improvements to Antelope and Caperton canals that include realignment, canal lining and pipe encasement. However, portions of open canal will remain within open space and other common areas. These open segments could receive potentially contaminated runoff unless specific measures are implemented.

Both the County's General Plan and the zoning ordinance are intended to protect canals, as well as streams. Therefore, a 100-foot property line setback from all canals is required to mitigate potential adverse water quality impacts on this watershed and the bodies of water associated with domestic water supplies.

By providing setbacks and requiring design and construction of runoff controls and/or other engineered means of water quality protection in accordance with PCWA standards, Mitigation Measure H-I would reduce the impact to less than significant. Maintenance of these controls would be the responsibility of the owner(s) of the land upon which the improvements reside.

Mitigation Measure H-7c: Implement Placer County policies and ordinances related to permitting, design, construction, and maintenance of septic systems

Placer County has developed standards for design, construction, and maintenance of septic systems, including requirements for maximum and minimum allowable percolation rates, minimum distance from leach fields to the groundwater table, minimum offsets from streams and water supply pipelines, and system design standards based on site-specific conditions. The Applicant has completed studies which concluded that each of the affected parcels is capable of supporting a domestic septic system. Each septic system will be permitted individually by Placer County upon demonstration that site conditions and the proposed site-specific septic system design do not pose a threat to groundwater or surface water quality. Parcels that do not meet Placer County's minimum standards (if any) will be connected to the sanitary sewer.

Appropriate operation and maintenance of septic systems will be the responsibility of the individual property owner. The CC&Rs will include provisions to ensure that purchasers are aware of the applicable regulatory requirements and agree to comply.

Public Services

Mitigation Measure PS-5a: Provide will-serve letter and participate in the Penryn/Lincoln/Sunset pipeline

If the Penryn/Lincoln/Sunset pipeline is constructed by early 2001 as anticipated, the proposed project would not impact the treated water supply. However, if long delays are encountered, the proposed project could cause the hydraulic capacity of existing conveyance systems to reach capacity. To mitigate potential impacts to other customers, PCWA should carefully track the progress of the Penryn/Lincoln/Sunset pipeline project and actual water usage over the next two to three years. If unforeseen delays in design, permitting, or construction of the new pipeline are encountered, then portions of the proposed project may need to be delayed. Building permits for the proposed project should only be issued to the extent that adequate capacity can be assured at the time of actual water

EXAMPLE [17] continued

service connection. In accordance with Placer County General Plan Policy Number 4.C.1, the Applicant must provide written assurance to Placer County that PCWA is able to meet the project's water demands at the time of service connection. Participating in the construction of facilities that would increase the capacity of the water distribution system would fully mitigate this potentially significant impact, and the residual impact would be less than significant.

Mitigation Measure PS-6: Provide water pipeline improvements

The Applicant proposes to design and construct a 16-inch off-site water supply pipeline in accordance with PCWA standards. These standards specify acceptable pipe materials and joint types and require that all treated water pipelines are pressure tested for leakage and breakage at 150 PSI or 150 percent of line pressure, whichever is higher, assuring that there can be no "loose joints" in these lines. Air Vacuum Release Valves are required to be installed at high points in pipelines to automatically expel air from the pipeline and should a loss of pressure occur to automatically let air back into the pipeline so that negative pressures do not occur.

This mitigation measure would therefore reduce the impact to a less-than-significant level.

Mitigation Measure PS-8: Provide for increased hydraulic loading, maintenance, or special design to prevent odor and blockages in off-site sewer pipelines until flows from other sources are sufficient to ensure adequate velocity, if and when such conditions arise.

The purpose of this mitigation measure is to prevent solids accumulation in the 48-inch sewer pipeline along SR 193 and associated odors should a 48-inch pipeline be constructed rather than a 12-inch pipeline, to satisfy future regional needs as well as those of the proposed project. Depending on economic feasibility, and Placer County design standards, this may be accomplished by:

- hydraulic dosing at proposed pump stations to increase flows,
- maintenance and periodic flushing to remove accumulated solids, or
- other design features approved by Placer County.

Design and construction of the necessary improvements would be the responsibility of the Applicant. However, upon conveyance of the system to either the JPA or Placer County, the new owner would be responsible for operation and maintenance of the facilities to control potential odor impacts. The residual impact would be less than significant.

Mitigation Measure PS-9: Prepare and implement traffic and safety plan for maintenance of off-site sewer line

Sewer maintenance will be the responsibility of either the JPA or Placer County, as would implementation of this mitigation measure. To protect public safety during maintenance activities, a traffic and safety plan will be prepared to cover maintenance activities by the agency or jurisdiction responsible for such maintenance. Maintenance crews must follow all applicable Public Works Department procedures for cordoning off work areas and providing signage and traffic diversions to alert motor vehicles. Whenever practical, maintenance within rights of way should be performed during off-commute daylight hours. The residual impact would be less than significant.

Mitigation Measure PS-10a: Design off-site sewer pipeline per Placer County requirements

EXAMPLE [17] continued

The Applicant is responsible for designing and constructing portions of the off-site sewer in accordance with design standards set forth by Placer County. This mitigation measure would reduce potential impacts to surface water to less than significant.

Mitigation Measure PS-10b: Design off-site sewer pipeline with watertight joints

The Applicant is responsible for designing and constructing portions of the off-site sewer in accordance with design standards set forth by Placer County. This mitigation measure would reduce potential impacts to surface water to less than significant.

Mitigation Measure PS-11a: Participate in construction of additional wastewater treatment capacity to accommodate projected flows

The City of Lincoln has agreed to provide wastewater treatment services for the proposed project. The existing LWWTP would have to expand to 2.4 mgd as planned to accept the first phase of the proposed project; and if it is expanded to 2.4 mgd as planned, it would be 2003 before the flows from the Bickford Ranch project and other customers would exceed the available capacity of that plant. Completion of the RWWT in 2001 would provide the necessary capacity to allow complete buildout of the proposed project. Fees paid by the Applicant for the proposed project and those generated from other approved projects would enable the expansion and new plant, thereby reducing the impact to less than significant.

Mitigation Measure PS-11b: Issue building permits only when sufficient wastewater treatment capacity exists or will exist at time of sewer connection

Placer County and other local agencies served by the LWWTP should carefully track the progress of WWTP construction for both plants, and coordinate with the City of Lincoln and the JPA to track actual flows to the WWTP(s) over the next four years. Building permits for previously approved projects and the proposed project should only be issued to the extent that sewage treatment capacity is available at the time the permits are issued, or to the extent that adequate treatment capacity can be assured at the time of actual sewer connection. If unforeseen delays in design, permitting, or construction of the WWTP improvements are encountered, then portions of the proposed project may need to be delayed. Preventing construction of facilities that would cause the capacity of the treatment system to be exceeded would fully mitigate this potentially significant impact, and the residual impact would be less than significant. Assurance of adequate wastewater treatment capacity will be provided in writing by the City of Lincoln to Placer County, and will include a statement that current (as of the date of the statement) capacity exists, or that construction is under way (as of the date of the statement) that will provide such capacity.

Mitigation Measure PS-23: Pay statutory fees to existing school district(s)

The Applicant will pay its pro-rata share of statutory school fees to support upgrade of existing facilities or new facilities to serve the proposed project.

Mitigation Measure PS-24a: Donate a site, construct, and partially equip a fire station

The Applicant proposes to donate a site for a fire station and to fund the construction of the station through the proposed Community Facilities District or other private future bond sales. Fire protection for the site is currently divided into three agencies. Estimates of the response time (to the site entrance at Sierra College Boulevard) from the existing agencies are near or slightly greater than the Placer County recommendation of six minutes. Demography of project residents warrants that emergency response and fire response times should be less than the current standards in the surrounding area. An increased standard and decreased response time would be achieved with an on-site station.

EXAMPLE [17] continued

Mitigation Measure PS-24b: Establish Fire District jurisdiction and emergency response standards for the project

There are three fire districts involved with this project: the Penryn Fire District, the Placer County Fire District which contracts with the California Department of Forestry (CDF) for the western portion of the site, and the CDF which is also responsible for wildland fire management. At this time the open spaces and wildlands of the project are the jurisdiction of CDF. The jurisdiction of the proposed development has not yet been resolved. CDF has a contract with Placer County to provide emergency fire and emergency medical service to the non-wildland portions of the County (Guyan, 1998). The Penryn Fire Department is a separate and independent fire protection entity governed by their own board of directors with responsibility for structural and emergency medical services to the eastern portion of this project. It is up to the individual districts to determine the type and level of fire and emergency service to the project.

Since there are no standards established for this project yet, there are no standards for response times, although CDF considers a five minute response to be desirable. Response times will be affected by the proposed closing of Clark Tunnel Road. From the existing Placer County Fire District (contracted CDF) fire station to the entrance of Bickford Ranch at Sierra College Boulevard, the travel is approximately 3.5 to 4.0 miles with a response time of 4 minutes 30 seconds. Additional time would be required to arrive at any particular residence or facility within the development. This additional time would be as much as four minutes to the far eastern portions of the site. It is estimated that the Penryn Fire District has approximately the same response time. The Penryn Fire District might have a shorter but more difficult travel route along English Colony Way. This issue should be settled before final design of the project is complete so that the fire issue may be addressed in a timely and efficient manner. A boundary adjustment for fire district service through LAFCO will be required.

The impact would be less than significant if the proposed fire station site were utilized by a fire district that has full jurisdiction of the structural (non-wildland/open space) areas within the project site. Funding for the additional crew and engine would be provide by the revenues generated by the County and the development.

Mitigation Measure PS-24c: Pursue single-jurisdiction fire service

The Placer County Office of Emergency Services prefers that a single local fire protection provider be identified to serve the proposed project, rather than have the jurisdiction split between two entities. If the County Fire Department serves the project, the eastern portions of the project will be recommended for detachment from the Penryn Fire Protection District. If the Penryn Fire Protection Department serves the project, the northern and southern portions of the project are recommended to be annexed into Penryn Fire Protection District (see Figure C7-1).

Mitigation Measure PS-25a: Grade driveways to slopes of 15 percent or less at the time of home construction; a Grading Permit will be required for those identified lots prior to the issuance of a Building Permit.

To prevent deviation from the State Fire Safety Standard, as adopted in the County's Land Development Ordinance (PRC 4290, Title 14 CCR), prohibiting unpaved driveways on slopes greater than 15 percent, the Applicant will provide graded driveway access to all lots at slopes of 15 percent or less, where feasible.

EXAMPLE [17] continued

Mitigation Measure PS-25b: Pave driveways with asphaltic concrete or concrete at the time of home construction on driveways with slopes of 16 to 20 percent; a Grading Permit will be required for those identified lots prior to issuance of a Building Permit.

Where it is infeasible to provide graded driveway access to all lots at slopes of 15 percent or less, the Applicant will provide asphalt concrete or concrete driveways on slopes of greater than 15 percent and less than 20 percent.

Mitigation Measure PS-25c: Prohibit development on lots with driveway access in excess of 20 percent

The Applicant will prohibit development on all lots with driveway access greater than 20 percent

Hazardous Waste/Materials

Mitigation Measure HW-4: Comply with the recommendations of a limited groundwater investigation

A limited groundwater investigation, planned and conducted by qualified environmental engineering consultants, will be conducted to assess whether contaminated groundwater exists downgradient of the former ranch headquarters area. Such an investigation will include installation and sampling of one or more borings to shallow groundwater located on the project site immediately downgradient of the headquarters area. If the analytical results are other than non-detect, follow up investigation will be required to assess appropriate remedial action. The Applicant will comply with the recommendations of the groundwater investigation.

Mitigation Measure HW-6a: Comply with Placer County Department of Environmental Health requirements for preparation and filing of Emergency Response Plans and Hazardous Materials Storage and Containment Plans

The Applicant proposes to comply with Placer County Department of Environmental Health requirements for preparation and filing of Emergency Response Plans and Hazardous Materials Storage and Containment Plans. These requirements apply to any commercial business which stores an acutely hazardous substance or 55 gallons and/or 50 pounds of a hazardous substance or 200 cubic feet of combustible gas. These plans would be prepared under Article 80 of the Uniform Fire Code. Copies of these documents must be provided to the CDF and the Penryn Fire Department. These measures would reduce the impacts to a level which is less than significant.

Mitigation Measure HW-6b: Finalize and implement the Applicant's Golf Course Chemical Application Management Plan

The Applicant shall prepare a draft Golf Course Chemical Application and Management Plan (CHAMP) and Water Quality Monitoring Plan. The purpose of the CHAMP is to document turf/landscape maintenance policies and procedures to be employed at the golf course and associated facilities. The specific objectives of the policies and procedures are to:

- Prevent and minimize potential impacts to soil, surface water (runoff), and groundwater from use of pesticides, fertilizers, and other potentially hazardous materials;
- Provide for appropriate management and storage of potentially hazardous chemicals used at the golf course; and

EXAMPLE [17] continued

- Provide for monitoring to provide data for management feedback and to demonstrate these objectives have been achieved.

Locations for water monitoring shall be based on the management information objectives of the CHAMP and shall have a sound hydrogeologic basis. Monitoring points shall be located generally as indicated on Figure GW1-1. Two types of groundwater monitoring wells shall be provided. Type 1 monitoring wells shall be located in the shallow groundwater zone within the zone of decomposed granitic bedrock adjacent to selected fairways to provide early feedback for management purposes. Type 2 wells shall be sited to provide more general coverage within the shallow groundwater zone of portions of the golf course and associated detention basins.

- **Type 1 Monitoring Wells** – A minimum of four groundwater monitoring locations shall be sited, as shown in Figure GW1-1, directly adjacent to selected fairways and the driving range to provide early identification of potential water quality problems and implementation of corrective actions within a short time frame. The wells shall be sited in proximity to the flowlines of existing natural drainageways. Siting of the wells shall be directed by a professional geologist or hydrogeologist to monitor shallow, laterally migrating groundwater within the zone of decomposed granitic bedrock, and shall be completed and screened to the base of the zone of decomposition. These wells are identified as:
 - Monitoring Well (MW)1-1, to be located adjacent to the lower end of the driving range;
 - MW1-2, to be located adjacent to the fairway and green of the 12th hole;
 - MW1-3, to be located in proximity to a drainage way below the fairway of the 14th hole; and
 - MW1-4, to be located in proximity to a drainage way adjacent to the fairway and green of the 6th hole.
- **Type 2 Monitoring Wells** – Four groundwater monitoring locations shall be sited on the golf course perimeter to provide overall coverage of the majority of the golf course area. The wells shall be sited in proximity to the flowlines of existing natural drainageways, and shall be designed to monitor shallow, laterally migrating groundwater within the zone of decomposed granitic bedrock. Installation of these wells shall be supervised by a geologist or hydrogeologist, and they shall be completed and screened to the base of the zone of decomposition.
 - MW2-1 shall be located in Clover Valley approximately ¼ mile northeast and upgradient from Clover Valley Reservoir. This location provides coverage of shallow groundwater draining managed turf areas associated with golf course holes 12 through 16 and a portion of the 17th fairway. MW2-1 is also downgradient of three detention ponds and a PCWA storage pond.
 - MW2-2 shall be located at the confluence of the Clover Valley Creek drainage and a drainage which includes the 10th hole and a portion of the 1st hole. This location is also downgradient of the portion of the golf course monitored by MW2-1.
 - Monitoring well MW2-3 is to be located downgradient of a detention pond within a drainage to the north of Boulder Ridge. The fairway and green of the 7th hole is located in the upper end of the drainage.
 - Monitoring well MW2-4 is located downgradient of a detention pond in the drainage that includes the 3rd and 4th holes.

EXAMPLE [17] continued

- Surface Water Monitoring – The PCWA pond that will be constructed adjacent to the 13th hole will become part of the canal operating system. This pond would intercept surface water runoff from several fairways on the eastern portion of the golf course and shall be incorporated into the monitoring program as surface water monitoring location SW-1.

Details of the plan cover the specific sampling parameters to be used, the frequency of sampling, and the reporting of results. This is described in more detail in Master Response GW-5. The draft CHAMP is generally adequate for the current status of the project. When a golf course owner/operator prepares operational plans, it will then be appropriate to amend the CHAMP with details of the following:

- Golf course layout.
- Drainage facilities.
- A minimum 25-foot natural area buffer zone between managed turf and water bodies.
- A map delineating the relationship between managed turf, natural areas, and surface water bodies.
- Selection of plant and turf material to minimize need for pesticide use.
- A specific list of chemicals to be used.
- Procedures for the use of each chemical.
- Schedule for soil nutrient testing that provides for testing once per year, after one year of testing that demonstrates that nutrient requirements remain relatively constant.

The County must accept the final CHAMP prior to issuance of grading permits or approval of improvement plans, whichever is issued first.

Implementation of a CHAMP approved by Placer County would reduce the potential impacts of the use of golf course chemicals to a less-than-significant level.

Mitigation Measure HW-6c: Comply with underground storage tank regulations through the Placer County Environmental Health Department

Any commercial businesses that have underground storage tanks and/or aboveground storage tanks must comply with underground storage tank regulations through Placer County.

PROJECT-SPECIFIC MITIGATION REPORTING PLAN

The following mitigation measures for the Bickford Ranch project will require ongoing monitoring to insure implementation of these measures. In compliance with Section 31.840 of the Placer County Environmental Review Ordinance, the components of the specific reporting plan for this measure are listed in the attached table.

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING																														
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding																								
Biology Resources																														
<p>B-2a: Implement the Applicant’s oak forest conservation and revegetation plan</p> <p>The plan will require replacement of approximately 10,653 oak trees at a ratio of 2:1 using native oak trees grown from acorns collected onsite or in the immediate vicinity. A total of approximately 21,200 trees will be planted at an average density of 100 trees per acre. Plantings will be installed within two years of tree removal. In addition, 6,000 more mature trees (5-gallon, 15-gallon, and 24-inch box) will be planted to replace tree canopy and to provide visual screening. The plan will be developed and implemented in cooperation with the CDFG, U.S. Department of Agriculture Natural Resource Conservation Service, the California Department of Forestry and Fire Protection, and the University of California Cooperative Extension.</p> <p>Planting sites will be indicated on a project site map and will include areas within all proposed Bio Filter zones, the proposed nature area in Bickford Ranch Park, along selected portions of the project site edges, between natural open space areas and roads, in Tower Park, and in additional areas of existing oak woodland where young trees do not currently exist. Site selection criteria will include slope aspect, soil conditions, accessibility for maintenance and monitoring, irrigation water availability, potential for ecosystem enhancement, and potential for prescribed burning to prepare and manage planting sites.</p> <p>Tree spacing will be as follows:</p> <table><tr><td><u>Trees per Acre (approximate)</u></td><td><u>Spacing Between Trees (feet)</u></td></tr><tr><td>10</td><td>66</td></tr><tr><td>20</td><td>46</td></tr><tr><td>40</td><td>33</td></tr><tr><td>80</td><td>23</td></tr><tr><td>100</td><td>21</td></tr><tr><td>200</td><td>15</td></tr><tr><td>400</td><td>10</td></tr></table> <p>Irrigation will occur from May through September for the three years after planting, unless post-irrigation monitoring determines that tree survival requires additional irrigation – see Response I4-217 in the FEIR. This timing can be modified as necessary for extremely wet or dry years.</p> <p>Maintenance will occur according to the following schedule:</p> <table><tr><td><u>Year Following Planting</u></td><td><u>Irrigation Schedule</u></td><td><u>Weed Removal</u></td><td><u>Replanting</u></td></tr><tr><td>1</td><td>Weekly</td><td>4 times per year</td><td>Once per year in fall</td></tr></table>	<u>Trees per Acre (approximate)</u>	<u>Spacing Between Trees (feet)</u>	10	66	20	46	40	33	80	23	100	21	200	15	400	10	<u>Year Following Planting</u>	<u>Irrigation Schedule</u>	<u>Weed Removal</u>	<u>Replanting</u>	1	Weekly	4 times per year	Once per year in fall	Applicant	Planning Department	Within 2 years of tree removal	Annually for 5 years	Minimum 80 percent survival rate after 5 years	Applicant
<u>Trees per Acre (approximate)</u>	<u>Spacing Between Trees (feet)</u>																													
10	66																													
20	46																													
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<u>Year Following Planting</u>	<u>Irrigation Schedule</u>	<u>Weed Removal</u>	<u>Replanting</u>																											
1	Weekly	4 times per year	Once per year in fall																											

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING																					
Mitigation Measure				Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding												
<div>2Every other week4 times per yearOnce per year in fall</div> <div>3Every other week4 times per yearOnce per year in fall</div> <div>4Every fourth week4 times per yearOnce per year in fall</div> <div>5Every fourth week4 times per yearOnce per year in fall</div> <p>The 80 percent survival rate applies to each planting area. Survival will be measured in late summer of each year to allow for assessment of replacement needs in fall. Minimum survival rate will be as follows for each year:</p> <table><thead><tr><th>Year Following Initial Planting</th><th>Percent Survival</th></tr></thead><tbody><tr><td>1</td><td>95</td></tr><tr><td>2</td><td>90</td></tr><tr><td>3</td><td>90</td></tr><tr><td>4</td><td>90</td></tr><tr><td>5</td><td>80</td></tr></tbody></table> <p>Species to be planted will be native oaks and riparian species, including interior live oak, blue oak, California sycamore, willows, Fremont cottonwood, California buckeye, big-leaf maple, flowering ash, and native shrubs. Revegetation size stock (2 by 2 by 10-inch containers) will be used for plantings.</p> <p>Only plants installed during the dry season (between mid-March and mid-November) will be irrigated for the first three years of growth. The Applicant’s staff will monitor the irrigation systems for damage. Maintenance of all plantings will include biannual fertilization, spring and summer weed control, and replacement of damaged or dead plants.</p> <p>Plantings will be required to meet a minimum survival rate of 80 percent at the end of a five-year establishment period. If this rate is not met at the end of the five years, replanting and continued monitoring will be conducted. Monitoring of the replacement plantings will be conducted annually for a minimum of five years to collect survival and growth data and provide photographic documentation of tree growth. An annual inventory and inspection of the growth and condition of all plantings will be conducted annually by a qualified arborist approved by Placer County. A meeting to report on research and need for mitigation refinements will be conducted annually for five years following the planting.</p> <p>Additional habitat conservation programs to be developed with the University of California Cooperative Extension, University of California at Davis, and Sierra College will include an inventory of natural open space areas to assess potential as habitat enhancement sites, an avian habitat improvement program, and a fire-safe fuel management program.</p>				Year Following Initial Planting	Percent Survival	1	95	2	90	3	90	4	90	5	80						
Year Following Initial Planting	Percent Survival																				
1	95																				
2	90																				
3	90																				
4	90																				
5	80																				
B-2d: Implement a tree protection plan				Applicant	Planning	Prior to approval	Prior to grading	All elements of	Applicant												

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>The Applicant will develop and implement a tree protection plan to minimize direct and indirect impacts on oaks and other native trees that are to be retained on the project site. The elements of this plan will be included as standards in the tentative map conditions and, where applicable, in the CC&Rs for homeowners on the project site. At a minimum, the plan will include the following measures:</p> <ul style="list-style-type: none"> ■ If the proposed construction area for an individual lot matches that shown in the development notebook on file with Placer County, the Applicant's proposed mitigation will be sufficient, and no further tree mitigation will be required. If the proposed construction area for an individual lot differs from the development notebook, a final tree count within the new construction area will be prepared to identify all trees with a DBH of 6 inches or more. For mitigation of removing any trees in excess of those identified in the Applicant's tree removal plan, the home builder will pay into either the Placer County Tree Preservation Fund or into a mitigation fund to be established by the Applicant and used to plant additional native trees onsite. Home builders owning a cluster of lots may remove the net total of trees for the lots as identified in the Applicant's tree removal plan. Any additional trees removed will be mitigated by payment into either the County's Tree Preservation Fund or a mitigation fund for on-site plantings. ■ During construction on the project site, measures will be taken to protect trees, including erecting orange construction barrier fencing, that will remain for the duration of construction activity, at least one foot outside the dripline of each tree or groves of trees to be retained; minimizing trenching for installation of utility lines; and conducting by hand any work within driplines of trees to be retained. ■ A contractor seeking a variance to machine excavate within tree driplines will be required to minimize damage to roots over two inches in diameter. The project biological monitor (see Mitigation Measure B-2b) will report root damage to Placer County and have a certified arborist inspect the tree damage prior to backfilling. The arborist will determine if the damage is likely to be fatal to the tree. Any fatally damaged tree will be mitigated by payment into either the Placer County Tree Preservation Fund or into a mitigation fund to be established by the Applicant and used to plant additional native trees on site. ■ Tree preservation notes and specifications will be included on all plans and in contractor contracts. 		Department and Department of Public Works	of improvement plans	during construction	the tree protection plan are implemented	

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<ul style="list-style-type: none"> ■ Irrigation and other potential sources of runoff associated with the constructed project will be diverted away from oak trees retained within all areas outside of the designated natural open space. To protect oaks from fungal root infection, drainage features will be constructed to intercept runoff from development upslope of the retained trees. ■ Before any tree removal following home construction, homeowners will be required to obtain approval from the Homeowners Association and a permit from Placer County for any protected trees. ■ Homeowners will be provided with information regarding the care of native trees and landscaping measures to use beneath oak trees. An example of such literature includes Living Among the Oaks, a publication of the University of California Cooperative Extension, Natural Resources Program. ■ Construction of all equestrian, bicycle, and pedestrian trails, in particular the trails to be constructed within the natural open space, will avoid removal of protected trees, except where infeasible. 						
<p>B-4c: Implement the Applicant's wetland preservation and impact plan</p> <p>All wetland mitigation, with the exception of vernal pool mitigation, will occur on-site within the natural open space in the Meadows community area. Creation of 12.29 acres of wetland mitigation is proposed, including 8.49 acres of seasonal wetland/emergent marsh/riparian habitats and 3.80 acres of emergent marsh wetland along the fringe of the proposed lakes. An additional 15.07 acres of open water will be created within the seven constructed lakes. Upon construction of the wetland habitat, an as-built map will be created and submitted to the Corps. Annual monitoring will commence after the first growing season and continue for five years. Annual monitoring reports will be submitted to the Corps.</p> <p>In addition, the Applicant's wetland preservation plan will include the following components:</p> <ul style="list-style-type: none"> ■ Establishment of vegetated wetland preservation easements of at least 50 feet and up to 100 feet around wetlands within 5-acre rural estate lots, equestrian, park, and golf course areas; ■ Construction of Bio Filters (shallow depressions) between upland areas and wetlands within the Meadows community areas to protect water quality; ■ Construction of wildlife travel corridors (in culverts) beneath roadways where wetlands are located near roads; 	Applicant	Planning Department	Prior to approval of Tentative Map	Annually for 5 years	All elements of the wetland preservation and impact plan are implemented	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<ul style="list-style-type: none"> ■ Placement of fencing around wetlands during construction; ■ Placement of public awareness signs with information on Wetlands throughout Bickford Ranch; and ■ Dedication of some open space areas to Placer County, and maintenance of the other common open space areas by the Homeowners Association. 						
<p>B-5b: Conduct pre-construction surveys for special-status plants</p> <p>Before construction, the Applicant will hire a County-approved botanist to survey oak woodlands within all proposed construction areas for big-scale balsamroot. In all areas of oak woodland that will be graded, a survey should be conducted between March and May for big-scale balsamroot. If no special-status plants are identified within construction areas, no further mitigation is required. However, if one or more populations are found within proposed construction areas, the Applicant will implement measures to be developed in coordination with the CDFG to avoid the population, minimize impacts on the population, and/or compensate for removal of the population. Potential compensation measures may include avoidance of populations, where feasible; minimization of impacts on populations; purchase and preservation of another known population of the affected</p> <p>species; or attempts to transplant the species to an undisturbed area within the project site.</p> <p>Before construction and/or approval of improvement plans, the Applicant will hire a County-approved botanist to survey oak woodlands within all proposed construction areas for big-scale balsamroot and vernal pools within all proposed construction areas for Bogg's Lake hedge-hyssop, Hoover's spurge, dwarf downingia, Ahart's rush, Red Bluff dwarf rush, legenera, pincushion navarretia, slender orcutt grass, and Greene's tuctoria. In all areas of oak woodland that will be graded, a survey should be conducted between March and May for big-scale balsamroot. All vernal pools that will be graded should be surveyed in late April/early May and July for the special-status vernal pool species listed above. If no special-status plants are identified within construction areas, no further mitigation is required. However, if any special-status plant populations are found within proposed construction areas, the project biological monitor will evaluate the significance of the population(s). If any special-status plant population is too small and isolated to be sustainable, the impact will be considered less than significant. If any special-status plant population is large enough to be potentially sustainable, the loss of the population will be considered significant and the Applicant will implement mitigation. Potential mitigation</p>	Applicant	Planning Department	Prior to construction	Once per construction work package	Special-status plants are avoided, or compensation approved by CDFG is implemented	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>measures for the loss of a special-status plant population include complete avoidance of the population, if feasible; minimization of the impact, i.e., partial avoidance; purchase and preservation of another known population of the affected species; transplantation of the plants or collection and sowing of the seeds to another on-site location; collection and sowing of seeds to an off-site location.</p> <p>The most feasible of these potential mitigation measures for any California balsamroot population that could not be avoided would be to transplant or seed the population to an undisturbed area of open-canopied oak woodland or grassy slope on the site. A recommended location is within the natural open space area off the northwestern corner of the proposed driving range.</p> <p>Avoidance or on-site transplantation is not feasible for the vernal pool plants, due to the proposed removal of all vernal pool habitat. The most feasible mitigation for special-status vernal pool species would be to scrape the topsoil (approximately two inches deep) from any vernal pool that supports a special-status plant population and place the soil within vernal pool habitat in a mitigation bank. The project site supports Mehrten formation vernal pools, which are not currently available at a mitigation bank. However, the special-status plants with potential to occur in the project area are not endemic to Mehrten pools and should survive in pools on other substrates. The Wildlands, Inc., is willing to accept a seed bank from the project site to transplant within vernal pool habitat at one of their wetland mitigation banks in Placer County (Berry, 2000).</p> <p>If a state or federal listed plant species population is identified within the proposed construction area, i.e., Bogg's Lake hedge-hyssop, Hoover's spurge, slender orcutt grass, or Greene's tuctoria, the Applicant will notify CDFG (for state-listed species) and/or the USFWS (for federally listed species). CDFG and/or the USFWS may impose alternative or additional mitigation requirements to the soil transplantation for impacts to listed species. If alternative mitigation requirements are imposed, the Applicant will implement the alternatives in lieu of the proposed soil transplantation. If additional mitigation requirements are imposed, the Applicant will implement both the soil transplantation mitigation and the agency mitigation.</p>						
<p>B-6: Compensate for loss of vernal pool fairy shrimp habitat</p> <p>The Applicant will compensate for direct effects on vernal pool fairy shrimp habitat associated with the project. This compensation will be achieved by implementation of one or a combination of the following measures, as described in the programmatic agreement between USFWS and the Corps (USFWS, 1995):</p> <p>■ Create suitable habitat for vernal pool fairy shrimp at a 1:1 ratio, for a</p>	Applicant	Planning Department	Prior to approval of grading permit	Once (for verification of purchase of credits); annually for 5 years (for created habitat)	Compensation is provided for loss of vernal pool fairy shrimp habitat	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>total of 0.23 acre of vernal pool habitat.</p> <ul style="list-style-type: none"> ■ Preserve suitable vernal pool fairy shrimp habitat at a 2:1 ratio, for a total of 0.46 acre of vernal pool habitat. The Applicant will purchase suitable vernal pool habitat credits at an off-site wetlands mitigation bank approved by Placer County. ■ Obtain authorization from USFWS to take listed fairy shrimp species that would be affected by the project. A biological opinion under the federal ESA is required from the USFWS before construction begins. <p>The mitigation credits purchased for the fairy shrimp impacts will apply to the vernal pool impacts, and no additional wetland credits will need to be purchased for the vernal pool impacts.</p>						
<p>B-7b: Protect VELB habitat (elderberry shrubs) during construction</p> <p>For elderberry shrubs that will not be removed or damaged by the project, the Applicant will protect elderberry shrubs from inadvertent harm during construction as described in the USFWS's VELB mitigation guidelines. The Applicant will:</p> <ul style="list-style-type: none"> ■ Fence and flag all areas to be avoided with a minimum setback of at least 20 feet from the dripline of each elderberry plant. ■ Brief contractors on the need to avoid damaging elderberry plants and the possible penalties for not complying with these requirements. ■ Install signs every 50 feet along the edge of the avoidance areas with the following information, "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction. ■ Restore the disturbed area to its original condition. Provide erosion control and revegetate with appropriate plant species, if needed. ■ The Applicant will provide a written description of how the core and buffer avoidance areas are to be restored, protected, and maintained after construction is completed. 	Applicant	Planning Department	Prior to approval of grading permit	Weekly during construction; quarterly after restoration for 1 year	VELB habitat is protected, and disturbed area is restored	Applicant
<p>B-7c: Compensate for loss of VELB habitat (elderberry shrubs)</p> <p>The Applicant will compensate for direct effects on VELB habitat associated</p>	Applicant	Planning Department	Prior to approval of grading permit	Daily during transplanting	Compensation is provided for loss	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>with the project. This compensation will be achieved by implementation of the following measures, as described in the programmatic agreement between USFWS and the Corps (1996):</p> <ul style="list-style-type: none"> Confirm the number of elderberry stems one inch or greater at ground level that would be affected by the project. Any elderberry shrub that has stems of at least one inch at ground level, and the project will permanently encroach within 100 feet of the shrub dripline, will be considered a removed shrub and will need to be compensated for. Determine the VELB units that would need to be mitigated for the project pursuant to the programmatic agreement between USFWS and the Corps. Compensate for the loss of VELB habitat determined above at an off-site location approved by the USFWS and the Corps. Obtain authorization from USFWS to take VELB that would be affected by the project. A biological opinion under the federal ESA is required from the USFWS before construction begins. All elderberry shrubs removed for construction will be transplanted to a suitable mitigation area on-site according to the protocol set forth in the programmatic agreement between USFWS and the Corps (1996). The mitigation area will provides at least 1,800 square feet for each transplanted shrub. The mitigation area will not be disturbed by future development or maintenance other than that needed to sustain the transplanted shrubs. The shrubs will be transplanted between November and February, when the plants are dormant and have lost their leaves. A biological monitor will oversee the transplanting process to ensure no unauthorized take of VELB occurs. Monitoring will be required for five years. A minimum survival rate of 60 percent is normally required when transplanted shrubs are moved to a mitigation site that also contains new plantings of elderberry and associated species. An individual survival requirement for a mitigation site containing only transplanted shrubs may need to be developed with the County. Provide additional on-site compensation by planting elderberry plants at a ratio of 2:1 for affected elderberry stems. Elderberry plants will be placed within proposed oak tree planting areas. Plantings should be located in areas that will not be disturbed by future development or maintenance. 				activities; then annually for five years	of VELB habitat off site; 60% survival rate for VELB transplanted on site, or as negotiated with County	
B-11a: Conduct preconstruction surveys for nesting raptors in affected	Applicant	Planning	Prior to	Once per	Impacts to	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>areas</p> <p>Before construction of any phase of the project between March and August in oak woodlands or riparian habitats, the project proponent will conduct preconstruction surveys to determine if nesting raptors are present on or near (within 500 feet) construction areas. Night-time surveys will be performed to determine the presence of nesting owls. If no nesting raptors are found, no additional mitigation will be need for that portion of the project. If these surveys detect nesting raptors on or near construction areas, a buffer zone will need to be established (see Mitigation Measure B-11b). If construction will occur outside of the nesting season (August through February), no preconstruction raptor nesting surveys are necessary.</p>		Department	construction	construction work package for construction occurring between March and August	nesting raptors are avoided	
<p>B-11b: Develop buffer zones around nesting raptors during construction.</p> <p>If nesting raptors are found on or near active construction areas, a no-disturbance buffer zone will be established until nesting activity or construction activity is completed. The distance and placement of the buffer area will be determined in consultation with CDFG. Typically, buffer zones consist of a 500-foot radius area around the nest tree. If construction will occur outside of the raptor nesting season (September – February), no raptor surveys are required.</p>	Applicant	Planning Department	Prior to construction	Weekly during construction	Impacts to nesting raptors are avoided	Applicant
<p>B-13f: Obtain and implement conditions of state and federal permits for impacts on waters of the United States</p> <p>The Applicant will obtain and implement all conditions in the following permits:</p> <ul style="list-style-type: none"> ■ Section 404 permit from the Corps for fill of waters of the United States, including wetlands (the project would likely qualify for approval under the Nationwide Permit Program). Compliance with Section 106 of the National Historic Preservation Act and with the federal ESA. To comply with Section 106, the Corps will obtain concurrence from the State Historic Preservation Officer that the project will have no effect on any historic property. Compliance with the federal ESA may require consultation with the USFWS under Section 7 of the act, which will result in completion of a biological opinion for all listed species affected by the project. ■ Section 401 water quality waiver or certification from the Regional Water Quality Control Board. ■ Section 1603 Streambed Alteration Agreement from CDFG. 	Applicant	Planning Department	Prior to approval of grading permit	Per federal and state permits	Compliance with conditions of state and federal permits	Applicant
B-13g: Protect wetlands during construction	Applicant	Planning	Prior to	Weekly during	Wetlands are	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>To minimize indirect impacts on jurisdictional waters of the United States that are connected to, but outside of, the project area, the Applicant will implement the following:</p> <ul style="list-style-type: none"> ■ Identify waters of the United States in the project area by fencing before construction activity. Fencing of wetlands within the Meadows community area will be placed to keep all construction equipment out of the wetlands during excavation of the lakes and grading of the Bio Filters. ■ Avoid sidecasting material into or near the stream channels and wetlands adjacent to project construction. ■ Grade drainage beds and banks of waters of the United States that are temporarily disturbed during construction to the preconstruction contours and replace the top 12 inches of soil and plant material. 		Department	construction	construction (to ensure fencing stays up); daily during activity adjacent to fencing	protected	
<p>B-16: Avoid removal of blackberry riparian vegetation</p> <p>The Applicant will avoid removal of blackberry shrubs in creeks and other drainages in the Bickford Ranch Plan Area. Avoiding removal of blackberry shrubs is necessary for the protection of riparian wildlife habitat, stream water quality, and potential California red-legged frog habitat.</p>	Applicant	Planning Department	Prior to approval of grading plans and approval of fuel modification plans	Annually	Blackberry shrubs in creeks and other drainages are protected	Applicant
Cultural and Archaeological Resources						
<p>C-3: Immediately stop ground disturbing activities in vicinity and consult qualified professional archaeologist, the Placer County Planning Department, the Department of Museums, and the County Coroner, if buried cultural deposits are discovered during construction. The County Coroner will notify the Native American Heritage Commission if it is determined that the remains are Native American Indian.</p> <p>In the event of the discovery of buried archaeological artifacts, exotic rock (non-native), or unusual amounts of shell or bone it is recommended that project activities in the vicinity of the find be immediately stopped and a qualified professional archaeologist consulted to assess the resource and provide proper management recommendations. In addition the Placer County Planning Department and Department of Museums must also be contacted. Such recommendations for important resources could include resource avoidance (Mitigation Measure C-1a), capping (Mitigation Measure C-1b), or data recovery excavations (Mitigation Measure C-1c). Work in the area may only proceed after authorization is granted by the Placer County Planning Department.</p> <p>Construction crews will be trained in the identification of archaeological resources prior to commencing ground-disturbing activities. This training will include: (1) proper identification of archaeological deposits; (2) the</p>	Applicant	Planning Department	During construction	At least weekly during construction; submit weekly reports to Planning Department	Cultural and archaeological resources are protected, or loss is compensated	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
procedures to be followed in the event of such a discovery; (3) an understanding of the importance of protecting cultural resources; and (4) an overview of applicable laws, statutes and ordinances. Training will be conducted by a qualified archaeologist in person, and written materials will be provided to each trained crew member, who will be required to sign that he or she has received the training, understands it, and agrees to abide by it.						
<p>C-4: Retain a qualified professional paleontologist to conduct weekly inspections during grading activities and salvage fossils as necessary</p> <p>Placer County requires that the Applicant retain a professional paleontologist to implement a plan for managing paleontological resources, monitor grading activities, and salvage fossils as necessary. A paleontological report produced for the Proposed Project (Noble 1997) recommends that given the low probability of encountering paleontological resources on the Bickford ranch, weekly inspections by a qualified professional paleontologist during grading activities shall be sufficient to manage these unique resources. The Applicant shall, however, provide written evidence to the Placer County Planning Department that a qualified paleontologist has been retained to provide the required services.</p>	Applicant	Planning Department	During grading activities	At least weekly during construction; submit weekly reports to Planning Department	Paleontological resources are protected and/or salvaged	Applicant
Air Quality						
<p>A-1b: Provide dust controls</p> <p>The Applicant will require construction contractors for the proposed project to submit a construction emission/dust control plan to the PCAPCD prior to ground breaking. At a minimum, this plan shall include the following measures:</p> <ul style="list-style-type: none"> ■ Water exposed earth surfaces as necessary to eliminate visible dust emissions (at least one water truck will be available for every three pieces of earthmoving equipment); ■ Suspend grading operations when wind is sufficient to generate visible dust clouds. ■ Pave, use gravel cover or spray a dust control agent on all haul roads; ■ Reduce speeds on unpaved roads to 15 mph or lower (this speed must be posted); ■ Clean earthmoving construction equipment with water once daily, and clean all haul trucks leaving the site; ■ Use tarpaulins for haul trucks which travel on public streets; ■ Institute measures to reduce wind erosion when site preparation is 	Applicant	Department of Public Works	Prior to approval of improvement plans and prior to approval of CC&Rs	Daily during construction; one weekend day each week during construction periods; submit weekly reports to Department of Public Works	Ensure that all dust control measures are implemented	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>completed; and</p> <ul style="list-style-type: none"> ■ Provide paved or grass-covered areas for construction employee vehicle parking. <p>Dust controls will ensure that all roadways, driveways, sidewalks, etc. be paved as soon as possible in the construction phase.</p> <p>For project components that would not be constructed / developed immediately following the mass grading phase, the following dust control measures are also recommended:</p> <ul style="list-style-type: none"> ■ Apply chemical soil stabilizers or commence reestablishing ground cover to construction areas within 96 hours of completing grading activities. ■ Develop and implement a wind erosion monitoring program for areas which will remain inactive for extended periods; this program should at a minimum provide for weekly monitoring of inactive sites to assess the effectiveness of wind erosion controls. <p>These measures will be incorporated into the CC&Rs.</p>						
Noise						
<p>N-1a: Restrict hours of construction activity</p> <p>Construction noise emanating from any construction activities for which a Building Permit is required is prohibited on Sundays and Federal holidays, and should only occur:</p> <ol style="list-style-type: none"> Monday through Friday, between 6:00 a.m. and 8:00 p.m. Saturdays, between 8:00 a.m. and 6:00 p.m. <p>This condition shall be noted in the Improvement Plans and in the Project Development Notebook.</p>	Applicant	Planning Department, Division of Environmental Health, and Department of Public Works	Prior to approval of improvement plans	Weekly during construction; submit weekly reports to Planning Department	Construction activity is restricted to specified hours	Applicant
Geologic Resources						
<p>G-1b: Prepare and implement a grading and erosion control plan</p> <p>The Master Grading Plans will show all proposed grading, drainage improvement, vegetation and tree removal. Revegetation of disturbed areas and vegetation maintenance will be provided for in the Master Grading Plan. The Master Grading Plan should include:</p> <ul style="list-style-type: none"> ■ General grading concepts, including reduction of impacts on sensitive habitat and open space, maintenance of natural character and aesthetic values, incorporation of existing drainageways and landforms, minimal disturbance of vegetation, including oak trees and 	Applicant	Department of Public Works	Prior to approval of grading plan	Daily during grading activities; weekly during construction; submit weekly reports to Department of Public Works	All elements of the grading and erosion control plan are implemented	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>soil stabilization.</p> <ul style="list-style-type: none"> ■ General guidelines for grading of hillside lots, including placement of retaining walls, consistency with geotechnical recommendations, consistency of lot drainage with the Master Drainage Plan and construction of unobtrusive interceptor ditches where necessary to reduce erosion potential. ■ Specific grading guidelines for Meadows, Ridges and Heritage Ridge portions of the project. ■ Guidelines for developing grading transitions, including terraces where necessary for stability and access to sloped areas. <p>An erosion control plan will be provided with the Master Grading Plan. The erosion control plan will contain Best Management Practices, including timing of grading activities to minimize soil exposure during the wet season. By October, all areas that have been graded and that will remain undeveloped during the rainy season will be revegetated with compatible native vegetation and secured from the possibility of erosion.</p> <p>Employment of measures during construction to prevent eroded soil from entering site drainageways, including: placement of hay bales or other acceptable materials such as sediment barriers, the installation of temporary earth berms and/or sediment traps, use of fabric silt fences, spreading hay or straw on exposed areas, development of temporary settling areas and use of other means for slowing runoff and reducing sediment loads.</p>						

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
Hydrology and Water Quality						
<p>H-3b: Prepare and implement a Storm Water Pollution Prevention Plan for construction activities</p> <p>The Applicant proposes to prepare and implement a Storm Water Pollution Prevention Plan. Construction activities involving the disturbance of five or more acres are required to apply for coverage under the SWRCB's NPDES General Permit for Storm Water Discharges Associated with Construction Activities. To obtain coverage under the permit, the Applicant must submit a Notice of Intent with the required permit fee and prepare a SWPPP. The contents of the SWPPP are set forth in detail in the permit application package and include development of site-specific structural and operational BMPs to prevent and control impacts to runoff quality, measures to be implemented before each storm event, inspection and maintenance of BMPs, and monitoring of runoff quality by visual and/or analytical means. The RWQCB will issue Waste Discharge Requirements (WDRs) which set forth conditions, discharge limitations, and monitoring and inspection requirements. Development and implementation of the SWPPP is the responsibility of the Applicant and its assignees.</p>	Applicant	Department of Public Works and Division of Environmental Health	Prior to approval of improvement plans	Weekly during construction	All aspects of the Storm Water Pollution Prevention Plan are implemented	Applicant
<p>H-3c: Monitor erosion and sediment control measures during construction</p> <p>The purpose of this mitigation measure is to provide a means of evaluating the effectiveness of erosion control measures and other storm water BMPs. The monitoring will be developed for, and included in, the SWPPP in accordance with the requirements of the NPDES General Permit. The monitoring program will be developed based on anticipated construction methods, sequencing, and schedule, and will be revised as appropriate for each phase of construction and when construction methods or schedule vary significantly from the proposed plan. Monitoring points may change over time as the buildout progresses, but will be selected to be representative of the project site and implemented BMPs as well as areas not protected by BMPs. Emphasis will be placed on monitoring vulnerable areas. All BMPs will be inspected before and after each rainfall and repaired and/or modified as required to control site erosion and trap sediments. Runoff sampling shall be performed during several storm events each year. Sampling should be timed to coincide with storms that generate noticeable runoff and samples shall be quantitatively tested for total suspended sediments. If the measured TSS exceeds the water quality goals or other limits imposed by the NPDES permit, immediate steps shall be taken to identify and remedy the problem.</p>	Applicant	Department of Public Works and Division of Environmental Health	Prior to approval of improvement plans	Weekly during construction, or as required by DPW	Water quality does not exceed goals or other limits of NPDES permit	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>H-5c: Monitor site erosion and sediment control measures for two years after implementation of final erosion control measures</p> <p>A long-term monitoring program will be developed in accordance with NPDES guidelines and incorporated into the Storm Water Management Plan. The program will be developed based on actual site drainage characteristics. Monitoring points will include all storm drain outfall pipes and pond and lake outlets and spillways. In addition, natural drainageways will be examined before and after each rainy season and measures implemented to repair and control identified areas of erosion, incising or head cutting. Emphasis should be placed on vulnerable areas (i.e., those exhibiting steep slopes and/or relatively erodible soil types).</p>	Applicant	Department of Public Works and Division of Environmental Health	Prior to approval of SWMP	As identified in SWMP	Long-term effectiveness of erosion and sediment control measures is verified	Applicant
<p>H-7d: Notify Placer County Department of Environmental Health and affected property owners if off-site sewer pipeline breaks</p> <p>For any existing wells within 50 feet of the proposed sewer alignment (or in cases where the DWR's standards for underlying soil type are not satisfied), the Applicant will provide for annual sampling and quantitative testing to determine levels of fecal coliform and nitrates present in those wells. Provision will be made for notifying the property owner of the results by the Placer County Environmental Health Department. Each potentially affected well will be tested prior to construction of the sewer to establish baseline conditions. Upon conveyance of the sewer to the JPA or other local agency, the responsibility for annual monitoring will revert to that agency.</p>	Owner of Sanitary Sewer	Division of Environmental Health	Break in off-site sewer pipeline	Whenever a break occurs	Notifications are promptly made	Owner of Sanitary Sewer
Hazardous Waste/Materials						
<p>HW-2: Report possible contamination to EHS-HMS</p> <p>Prior to initiating construction, all abandoned vehicle bodies and other casual refuse on the site shall be removed and disposed of appropriately. Construction contract specifications will require that, if during site grading and construction activities, any unearthed areas of apparent or suspected environmental impacts shall be immediately reported to the County's Environmental Health Services – Hazardous Materials Section. Resolution of the problem shall be to the satisfaction of Environmental Health Services and the Central Valley Regional Water Quality Control Board.</p>	Applicant	Department of Public Works and Division of Environmental Health	Prior to construction	Weekly during construction or more frequently if required by County	Possible contamination is reported, and problem resolved	Applicant

EXAMPLE [17] continued

MITIGATION MEASURES REQUIRING ONGOING MONITORING						
Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
<p>HW-3a: Comply with CDF and Penryn Fire Department requirements for temporary storage of combustible/flammable liquids at construction sites</p> <p>The Applicant proposes procedures to comply with the requirements of the CDF and the Penryn Fire Department. The CDF and the Penryn Fire Department have specific requirements for the temporary storage of combustible/flammable liquids at construction sites which must be followed. These requirements include inspection to verify maintenance of a vegetation break and identification of emergency shutoff valves and switches. If electrical connections are provided to these facilities, that County will additionally require permitting through the County Building Department. The Applicant shall also participate in the Community Right-to-Know program administered by the County.</p>	Applicant	California Division of Forestry, Penryn Fire Department, Placer County Fire Department	Prior to construction	Weekly during construction	Compliance with requirements for temporary storage of combustible/flammable liquids at construction site	Applicant
<p>HW-3b: Comply with County and CDF requirements for reporting releases of hazardous materials</p> <p>The Applicant proposes to comply with County and CDF requirements for reporting releases of hazardous materials. If a release of hazardous materials should occur, it will be contained and reported to the CDF and County Environmental Health Department immediately. Impacted soil will be excavated and disposed of as may be required by the County.</p>	Applicant	California Division of Forestry, Penryn Fire Department, Placer County Fire Department	During construction	Weekly during construction	Compliance with requirements for reporting releases of hazardous materials	Applicant